

## ABSTRACT

In accordance with the objectives of the invention a new method is provided for the creation of metal bumps over surfaces of I/O pads. Contact pads are provided over the surface of a layer of dielectric. The aluminum of the I/O pads, which have been used as I/O pads during wafer level semiconductor device testing, is completely or partially removed over a surface area that is smaller than the surface area of the contact pad using methods of metal dry etching or wet etching. The contact pad can be accessed either by interconnect metal created in a plane of the contact pad or by via that are provided through the layer of dielectric over which the contact pad has been deposited. The process can be further extended by the deposition, patterning and etching of a layer of polyimide over the layer of passivation that serves to protect the contact pad.